

the float must be entirely subject to the will of the animal, to its appreciation, if I may so speak; and this is really the case, as it never makes use of the mucosity of its foot except when it feels its float to be insufficient, just as the spider employs the silk with which its spinnerets furnish it only when injuries have rendered its web unfit to capture the prey which is necessary for its existence.

It is unnecessary to say that a gaseous secretion is inadmissible, and that there is nothing to warrant its existence.

From all that precedes, I may justly be asked whether I have seen in my aquaria *Ianthinæ* entirely deprived of their floats reconstruct new ones. I reply that the animals did not live long enough for this; it is with them as with the spider to which I have just referred: if we destroy its web, it reconstructs this, but at the expense of its body; and if we continue without allowing it to capture a prey, if its organization does not provide itself with what is necessary to repair the losses caused by secreting silk, it is seen to die of inanition. In the same way here: the *Ianthinæ* are animals of the high sea; they find in these regions their proper food, which they did not meet with, in all probability, in my aquaria; hence they only lived a short time, exhausted by their exertions and by the want of nourishment.

In conclusion, I will remark that Cuvier's opinion, so full of reserve and doubt, cannot be maintained. The float of the *Ianthina* cannot in any way represent an operculum, or even its distant analogue.

XXXI.—*Descriptions of some new Species of Diurnal Lepidoptera in the Collection of the British Museum.* By ARTHUR G. BUTLER, F.Z.S., Assistant, Zoological Department, British Museum.

Limenitis Calidasa, n. sp.

L. Calidasa, Moore, MS.

Alæ supra fusæ, fascia media irregulari albo-viridescente, antiearum maculas octo inæquales formante, posticarum integra, in medio latiore; area basali fascia media interrupta rubra nigro circumdata, basi fascia simili obscura; area apicali fascia submarginali rubra, maculis nigris utrinque marginata; margine postico pallido, lunulis nigris marginato.

Corpus fuscum; antennæ nigræ, rubro acuminatæ.

Alæ anticæ subtus area basali viridi, fascia media rubra a vena media partita, lineaque basali obliqua nigra; area apicali cinerea, venis apud costam rubris, linea rubra undata, maculisque nigris submarginata; fascia media velut supra nigroque utrinque marginata;

margine postico albo, linea fusca marginato, angulis alternis; ciliis albis venis nigro acuminatis.

Alæ posticæ area basali viridi, lineis sub vena costali duabus, puncto inter nervulos subcostales lineisque quatuor intra cellam nigris; fascia media latiore, lunulis brevibus nigris marginata; area apicali cinerea, fascia rubra velut supra; margine postico albo, lineis duabus fuscis marginato, angulis alternis, venis nigro acuminatis.

Corpus viride; antennæ ferruginæ.

Alar. exp. unc. $2\frac{1}{3}$.

Hab. Ceylon.

This species is allied to *Limenitis Zulema*, Doubl. & Hewits. (North India).

Euodia Joanna, n. sp.

Alæ anticæ supra fuscæ; macula parva apicali nigra purpureo pupillata, maculaque apud angulum analem majore simili; fasciis duabus fulvis de costa currentibus, una cellam terminante, similique apud apicem; fascia conspersa fulvo inter cellam angulumque analem currente.

Alæ posticæ fuscæ, ocello parvo apicali nigro ferrugineo circumdato, maculaque apud angulum analem majore violaceo pupillata.

Alæ anticæ subtus fuscæ, fasciis subcostalibus ad angulum analem productis; ocellis ochreo circumcinctis; margine postico lineis duabus pallidis marginato.

Alæ posticæ velut in *Euodia Abeona*, Donovan. (Australia), *Hipparchia? Abeona*, Doubl. (List Lep. Brit. Mus.), ocellis autem majoribus.

Alar. exp. unc. $2\frac{1}{16}$.

Hab. Australia.

Closely allied to *E. Abeona*, Donovan., of which it has been hitherto supposed to be a variety; but I can discover no proofs of the identity of the two insects, and have therefore described it as distinct.

It differs from *E. Abeona* above in having the distinct orange band of the front wings replaced by two pale-yellow streaky bands, and the anal ocellus of the hind wings much larger.

Below, the orange band of the front wings is replaced by a narrower and indistinct pale-yellow band, and the ocelli are more distinctly encircled by pale brown. In the hind wings the ocelli are proportionably much larger and brighter.

Lasiommata mirifica, n. sp.

Alæ anticæ supra fuscæ, fascia ochrea obliqua lata irregulari, de costa post medium ad angulum analem currente; macula alba inter venas discoidales apud marginem posticum.

Alæ posticæ fuscæ, ocello magno apud angulum analem nigro albo pupillato ferrugineoque circumcincto.

Alæ subtus fuscæ, cinereo variæ; *anticæ* fascia ochrea lata macula-

que alba; *posticæ* punctis albo pupillatis inter venas post alarum medium dispositis.

Alar. exp. unc. $2\frac{5}{8}$.

Hab. — ?

This species is most closely allied to *Lasiommata Merope*, Boisduval (Australia). Our specimen is unfortunately in very bad condition.

We have a female specimen of an insect somewhat more closely allied to this species: it differs from the usual form of *L. Merope* in having the apical half of the front wings black, the anal spot being small and quite distinct from the basal ferruginous portion of the wing; and the yellow spot below the front-wing ocellus is also replaced by a white spot.

XXXII.—*Some Account of a new Species of Fern* (*Polystichum Maderense*) recently discovered in the Island of Madeira. By JAMES YATE JOHNSON, Cor. M.Z.S.

I AM indebted to Mr. Joad, a zealous collector and student of Ferns, who has lately spent a few months in this island, for being permitted to examine and describe a Fern, of which he found a single specimen in the Ribeiro de Janella. The two or three fronds submitted to me show that the Fern is exactly intermediate between *Polystichum falcinellum*, Presl, and *P. angulare*, Presl, both of them natives of this island, the former being, as far as is known, peculiar to Madeira. Widely as these two forms appeared to be separated, they are certainly brought into close contact by the Fern which I now shortly describe.

The facies of the frond at once suggests an alliance with *P. angulare*. It is lanceolate, lax, and subbipinnate; that is, the pinnae are divided nearly to the midrib, and the lobes are narrowed, but not stalked, below. Each lobe has at its tip a short but conspicuous aculeus. The first lobe on the upper side of each pinna is elongate; and here we have an approach to *P. falcinellum*, a resemblance which is further displayed in the form of the pinnae at the upper end of the frond, and in the structure of the scales on the rachis, which are long and somewhat hair-like. The arrangement of the sori are more like what is seen in *P. falcinellum* than in *P. angulare*. The indusia are those of the genus.

The fronds of the specimen are upwards of 24 inches in length.

Further researches may show that this is only a variety of *P. falcinellum*; but for the present it seems best to register it as a distinct species.

Madeira, March 3, 1866.